

CLAIMS

1. A method of allocating resources in a communication system,
comprising:

maintaining a set of weights corresponding to each of a plurality of
remote stations;

identifying a group of the remote stations having weights within a first
range of values;

determining a desirability metric value for each remote station in the
group; and

if any remote station in the group has pending data:

selecting from the group a most desired recipient having the
greatest desirability metric value and pending data; and

transmitting data to the most desired recipient.

2. The method of claim 1 further comprising:

determining the first range of values as a function of a minimum weight
of the set of weights.

3. The method of claim 2 wherein determining the first range further
comprises:

defining the first range of values as weights falling within an offset K of
the minimum weight.

4. The method of claim 1 wherein if no remote station in the group has
pending data:

selecting a first recipient having a minimum weight of the set of weights;

and

transmitting data to the first recipient.

5. A wireless apparatus for allocating resources in a communication
system, comprising:

means for maintaining a set of weights corresponding to each of a
plurality of remote stations;

means for identifying a group of the remote stations having weights
6 within a first range of values;
means for determining a desirability metric value for each remote station
8 in the group;
means for determining if any remote station in the group has pending
10 data;
means for selecting from the group a most desired recipient having the
12 greatest desirability metric value and pending data if any remote station in the
group has pending data; and
14 means for transmitting data to the most desired recipient.

6. The apparatus as in claim 5 further comprising:
2 means for selecting a first recipient having a minimum weight of the set
of weights; and
4 means for transmitting data to the first recipient.

7. A processing apparatus to schedule data transmissions to remote
2 stations in a communication system, comprising:
a memory storage unit;
4 a processor coupled to the memory storage unit and adapted for:
maintaining a set of weights corresponding to each of a plurality
6 of remote stations;
identifying a group of the remote stations having weights within a
8 first range of values;
determining a desirability metric value for each remote station in
10 the group; and
if any remote station in the group has pending data:
12 selecting from the group a most desired recipient having
the greatest desirability metric value and pending data; and
14 transmitting data to the most desired recipient.

8. The apparatus as in claim 7, wherein the processor is further adapted
2 for:
selecting a first recipient having a minimum weight of the set of weights;
4 and

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transmitting data to the first recipient.

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9. A computer program stored on a computer-readable medium,
comprising instructions and commands for scheduling data transmissions in a
communication system by:

4 maintaining a set of weights corresponding to each of a plurality of
receivers in a communication system;

6 identifying a group of the remote stations having weights within a first
range of values;

8 determining a desirability metric value for each remote station in the
group;

10 determining if any remote station in the group has pending data:

12 selecting from the group a most desired recipient having
the greatest desirability metric value and pending data if any remote
station in the group has pending data; and

14 transmitting data to the most desired recipient.

10. The computer program as in claim 9, further comprising instructions for:

2 selecting a first recipient having a minimum weight of the set of weights;
and

4 transmitting data to the first recipient.

11. An infrastructure element in a communication system, comprising:

2 a plurality of data queues, wherein each data queue is associated with a
receiver in the communication system;

4 a scheduler for selecting a first queue of the plurality of data queues by:

6 maintaining a set of weights corresponding to each of the plurality
of receivers;

8 identifying a group of the receivers having weights within a first
range of values;

10 determining a desirability metric value for each receiver in the
group; and

if any receiver in the group has pending data:

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- 12 selecting from the group a most desired recipient having
the greatest desirability metric value and pending data; and
14 transmitting data to the most desired recipient.

12. The infrastructure element as in claim 11 wherein the scheduler is
2 further adapted for:
 selecting a first recipient having a minimum weight of the set of weights;
4 and
 transmitting data to the first recipient.

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